



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

April 13, 2010

Richard A. Baasch  
7921 71<sup>st</sup> Ave NW  
Gig Harbor WA 98335-6657

**Re: Water Right Application No. S4-35262 – Temporary Surface Water Diversion on Swauk Creek to be Used for Placer Mining**

**THIS AUTHORIZATION SHALL IN NO MANNER BE CONSTRUED TO GUARANTEE OR IMPLY THAT A PERMANENT WATER RIGHT WILL ISSUE FOR THE WATER USE HEREIN AUTHORIZED.**

**Background**

On October 20, 2009, Richard A. Baasch, of Gig Harbor, Washington, filed an application to divert water from Swauk Creek for Placer Mining from April 1 through November 30, starting 2010 and ending 2014. On January 29, 2010, a site visit was conducted by Eric Hartwig and Kurt Walker from the Department of Ecology (Ecology), Richard Baasch and Ron Baasch, the applicants, were also present.

The applicants propose to divert water at a maximum of 300 gallons per minute (0.67 cubic feet per a second) from Swauk Creek into ponds adjacent to the creek. When the pond is full, a pump will be placed into the pond and the water will be recycled to process the rock. The applicants propose to divert water mostly on the weekend and holidays, not to exceed 80 days per year.

The applicants described the water use for their 'high-banking' placer gold mining activities as follows: Water would be pumped from the river to a place where development material would be fed into a small plastic sluice box. Water passed through the sluice box is captured and allowed to infiltrate down to the shallow alluvial aquifer. Capture zones are located less than 200 feet from the creek. No direct discharge to the creek is proposed.

Water use on the west side of the creek is proposed to be captured by a topographic low which runs roughly parallel to Swauk Creek approximately 150 feet west from the active channel. Water used on the east side of the creek is proposed to be captured by holding ponds. The primary and largest holding pond is located just down gradient from the development material approximately 200 feet from Swauk Creek. Measurements of the largest pond taken on-site (45' W x 30' L x 6' D) were used to estimate the ponds holding capacity at 60,500 gallons. The water in the topographic low area and pond will return to the creek by infiltrating through the alluvial soils. The rate of infiltration is not precisely known.

The points of diversion will be located within SW¼NE¼ of Section 3, T. 20 N., R. 17 E.W.M., Kittitas County, Parcel No. 565335.



The place of use will be located within the SW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 3, T. 20 N., R. 17 E.W.M., Kittitas County, Parcel No. 565335.

### Geology and topography of the Site

Kurt Walker, Hydrogeologist, under guidance from a licensed Hydrogeologist for Ecology compiled the following data:

- There is approximately 1,500 feet of topographic relief near the proposed site. Valley walls are very steep and the valley floor is generally less than 500 feet wide (USGS, 1989).
- Swauk Creek runs generally north-south and cuts down through the Swauk Formation (fluvial and lacustrine arkosic sandstone and shale) which composes the valley walls and basement in the vicinity of the proposed site.
- Valley fill material is mapped as quaternary alluvium (Tabor, 1982). Upon observation, the active stream bed is primarily composed of sand, gravel, small cobbles, and lesser amounts of silt.
- The thickness of valley fill material is not well known throughout the area, but it is likely thin (less than 50 feet) given the narrowness of the valley floor. This is corroborated with a limited number of well logs in the area.
- A WADOT drilled a test hole (Well Log ID: 609892) near the proposed site and encountered bedrock at 17 feet bgs. The static water level was recorded at 9 feet bgs.
- Area well logs do not indicate the presents of any confining layer(s) in the alluvial aquifer near the site.
- Considering the information above, the aquifer characteristics of the shallow alluvial aquifer are as follows: Saturated thicknesses from 10-20 feet, hydraulic conductivities are estimated at approximately 2,000 gpd/ft<sup>2</sup>; consistent with clean sands and gravels (Freeze and Cherry, 1979). In turn, transmissivities are estimated from approximately 20,000 gpd/ft to 40,000 gpd/ft. Additionally, because no known barriers to flow exist, the shallow alluvial aquifer is assumed to be in hydraulic continuity with Swauk Creek.
- The following analysis found in Freeze and Cherry (1979) is an attempt to estimate the timing of when pumped water will be returned to the creek.

Using:

$$\begin{aligned}\text{Hydraulic Conductivity (K)} &= 2,000 \text{ gpd/ft}^2 \\ &= 267 \text{ ft/d}\end{aligned}$$

$$\text{Average Porosity (n)} = 0.25$$

$$\text{Hydraulic gradient (dh/dl)} = 0.025 \text{ (}\frac{1}{2}\text{ the topographic gradient)}$$

The average linear velocity ( $V_{avg}$ ) value may be estimated using the following formula:

$$V_{avg} = (K/n) (dh/dl)$$

Computation:

$$V_{avg} = [(267 \text{ ft/d}) / 0.25] [0.025] = 26.7 \text{ ft/d}$$

As a result, return flows should arrive 200 feet down gradient at the creek in approximately 7.5 days. It should be noted that this estimate is made using several assumptions and limited on-site data. Actual travel times may be greater or less than the one week estimate.



### **Public Notice**

Public notice of the application was published in the Daily record of Elensburg, Washington, on December 26, and January 1, 2010. No letters of protest or comments were received during the 30-day protest period.

### **Priority of this right**

This water right will be junior to all surface water users within the Swauk Creek Basin. By being the junior water right in the basin the possibility of being curtailed is very likely in summer to early fall of each year. Swauk Creek is highly influenced by snow melt in the spring and fall rains. The water will more likely be available during the spring and fall of each year due to these events.

### **Impairment**

Swauk Creek is a tributary to the Yakima River, all of which are part of the Yakima Basin Adjudication. The requested period of use for this Temporary Authorization is during the irrigation season. The probability of impairing senior water rights by diverting water during the months of April and November is minimal, as the use is considered non-consumptive. In addition, there are no points of diversion within the bypass reach.

### **Public Interest**

The use of this water for Placer Mining is a beneficial use, is non-consumptive and is not contrary to public interest.

Ecology consulted with the Washington State Department of Fish and Wildlife (WDFW). WDFW also considers this project not to be contrary to public interest. WDFW also indicated that an Hydraulic Project Approval (HPA) and fish screening of the diversion intake will be required.

### **Conclusions and Decision**

There is water available for the proposed project and can take place on a temporary basis without impairing existing water rights, is non-consumptive, and is not contrary to public interest.

This Temporary Authorization is subject to the following limitations and provisions:

1. The priority date of this water right is October 20, 2009.
2. The points of diversion will be located within SW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 3, T. 20 N., R. 17 E.W.M., Kittitas County, Parcel No. 565335.
3. The place of use will be located within the SW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 3, T. 20 N., R. 17 E.W.M., Kittitas County, Parcel No. 565335.
4. The period of use will be from April 13 through November 30, 2010.  
The period of use will be from April 1 through November 30, 2011 through 2014.
5. The authorization may be suspended due to low flows in Swauk Creek.
6. This authorization will expire November 30, 2014, unless sooner revoked for cause.
7. The diversion shall not exceed 0.67 cubic feet per second (300 gallons per minute).
8. The purpose of use is for Placer Mining.

9. A copy of the Fish and Gold Pamphlet must be on site during operation.
10. The diversion intake shall be tightly screened at all times with wire mesh having openings with dimensions not greater than 0.125 (1/8) inch.
11. The intake(s) shall be screened in accordance with Department of Fish and Wildlife screening criteria (pursuant to RCW 77.57.010, RCW 77.57.070, and RCW 77.57.040). Contact the Department of Fish and Wildlife, 600 Capitol Way N, Olympia, WA 98501-1091. Attention: Habitat Program, Phone: (360) 902-2534 if you have questions about screening criteria. <http://www.wdfw.wa.gov/reg/regions.htm>
12. The operator of the system under this authorization shall:
  - Be aware of the parameters and provisions and operate accordingly.
  - Have a copy of this Temporary Authorization.
  - Provide said copy of this Temporary Authorization upon request of Department of Ecology staff.
13. Diversion of water under this Temporary Authorization may be limited or otherwise regulated in favor of senior rights.
14. Under RCW 90.03.360, measuring is required for all surface water diversions, and all withdrawals of ground water in fish-critical basins. Whenever water is being diverted, volume of water shall be recorded & maintained by the permittee. These readings shall be documented by time, date, & the person conducting the measurements. Copies of these records shall be submitted to Ecology by January 31 of each year.
15. The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Permit No., source name and maximum instantaneous rate of diversion (cubic feet per second).
16. Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.
17. This Temporary Authorization shall in no way excuse the applicant from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.
18. The water source and place of use may not be located entirely upon land owned by the applicant. Therefore, the applicant is advised that issuance of a permit by the Department of Ecology for appropriation of the waters in question does not convey a right of access to, or other right to use, land which the applicant does not legally possess.
19. This water right may not be changed to any other purpose of use or place of use.
20. No water right in perpetuity shall result from this Temporary Authorization.




This Decision may be appealed pursuant to RCW 34.05.514(3), RCW 90.03.210(2), and Pretrial Order No. 12 entered in *State of Washington, Department of Ecology v. James Acquavella, et al.*, Yakima County Superior Court No. 77-2-01484-5 (the general adjudication of surface water rights in the Yakima River Basin). The person to whom this Decision is issued, if he or she wishes to file an appeal, must file the notice of appeal with the Yakima County Superior Court **within thirty (30) days of receipt of this Decision**. Appeals must be filed with the Superior Court Clerk's Office, Yakima County Superior Court, 128 North 2<sup>nd</sup> Street, Yakima WA 98901, RE: Yakima River Adjudication. Appeals must be served in accordance with Pretrial Order No. 12, Section III ("Appeals Procedures"). The content of the notice of appeal must conform to RCW 34.05.546. Specifically, the notice of appeal must include:

- The name and mailing address of the appellant;
- Name and address of the appellant's attorney, if any;
- The name and address of the Department of Ecology;
- The specific application number of the decision being appealed;
- A copy of the decision;
- A brief explanation of Ecology's decision;
- Identification of persons who were parties in any adjudicative proceedings that led to Ecology's decision;
- Facts that demonstrate the appellant is entitled to obtain judicial review;
- The appellant's reasons for believing that relief should be granted; and
- A request for relief, specifying the type and extent of relief requested.

The "parties of record" who must be served with copies of the notice of appeal under RCW 34.05.542(3) are limited to the applicant of the decision subject to appeal, Ecology and the Office of the Attorney General.

All others receiving notice of this Decision, who wish to file an appeal, must file the appeal with the Yakima County Superior Court within **thirty (30) days of the date the Order was mailed**. The appeal must be filed in the same manner as described above.

Sincerely,

  
Mark C. Schuppe, Section Manager  
Water Resources Program/CRO

MCS:EH:gg/100405

Enclosures: Water Measuring Requirements

Certified Mail: 7006 0100 0002 8191 9697

cc: Philip Rigdon, Director, Natural Resources Division, Yakama Nation